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— with international search report

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15 August 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **HUMAN GENES AND GENE EXPRESSION PRODUCTS**

(57) Abstract: This invention relates to novel human polynucleotides and variants thereof, their encoded polypeptides and variants thereof, to genes corresponding to these polynucleotides and to proteins expressed by the genes. The invention also relates to diagnostic and therapeutic agents employing such novel human polynucleotides, their corresponding genes or gene products, e.g., these genes and proteins, including probes, antisense constructs, and antibodies.

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09/803, 719

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C12N15/12 C12N15/10 C07K14/47 C07K16/18 C12Q1/68
 G01N33/574

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C12N C07K C12Q G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL [Online] Entry HS13887, Acc.no. Z98752, 23 August 1997 (1997-08-23) RAMSAY, H.: "Human DNA sequence from clone RP1-13887 on chromosome 20q13.12 Contains the 3' end of the gene for a Drosophila lethal (3) malignant brain tumor (l(3)mbt) protein homolog (KIAA0681, DFKZp586P1522), the SGK2 gene for serum/glucocorticoid regulated kinase 2, the 5' end of the gene for CGI-53" XP002179201 see nt. 24940-25300.</p> <p style="text-align: center;">--- -/-</p>	1,2,6,7, 12-14

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "Z" document member of the same patent family

Date of the actual completion of the international search

5 October 2001

Date of mailing of the international search report

12 Oct 2002

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/07787

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9811220	A	19-03-1998	AU	4414397 A	02-04-1998
			WO	9811220 A2	19-03-1998
WO 0102568	A	11-01-2001	AU	6069300 A	22-01-2001
			WO	0102568 A2	11-01-2001

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/07787

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-15, all partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: Invention 1: claims 1-15, all partially.

An isolated nucleic acid according to seq.ID.1 or one comprising at least 15 contiguous nucleotides having at least 90% identity to said seq.ID, host and/or vector comprising said polynucleotide, method for detecting differential expression of said nucleic acid, library containing said nucleic acid, and use of said nucleic acid to modulate expression of the corresponding gene in vitro.

2. Claims: Inventions 2-2396: claims 1-15, all partially

Subject matter as for invention 1, but related to the seqID's 2-2396, whereby invention 2 relates to seq.ID.2, invention 3 relates to seq.ID.3,, and invention 2396 relates to seq.ID.2396.

FURTHER INFORMATION CONTINUED FROM PCT/ISA 210

Continuation of Box 3.

Although claim 15, in as far as it pertains to an in vivo method, is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Further defect(s) under Article 17(2)(a):

Continuation of Box 3.

Claims Nos.: 8-10

Present claims 8-10 relate to a products defined by reference to a desirable characteristic or property, namely proteins encoded by nucleic acids of claims 1-4 and antibodies directed against these proteins. The application does not provide support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for such proteins, nor for said antibodies, since no open reading frame has been identified for the nucleic acid sequences of claims 1-4, and it has not even been established that the EST represented by the sequence ID 1 contain a translated portion. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search for the above claims is not possible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). Again, this renders a meaningful search of said claims impossible. Consequently, the search does not cover claims 8-10.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/07787

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9811220	A	19-03-1998	AU WO	4414397 A 9811220 A2	02-04-1998 19-03-1998
WO 0102568	A	11-01-2001	AU WO	6069300 A 0102568 A2	22-01-2001 11-01-2001